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# Journal of the Society of Arts.

FRIDAY, JULY 30, 1858.

## NOTICE TO INSTITUTIONS.

In accordance with the resolution passed at the last Annual General Meeting of the Society, the Council will present to each Institution in Union a quarto copy of the Speeches and Addresses of H.R.H. the Prince Consort.

The Department of Science and Art have placed in the hands of the Council a number of copies of the "Introductory Addresses on the Science and Art Department and the South Kensington Museum," delivered there during the last session, and a copy of this work will also be presented to every Institution in Union.

In addition to the above, the Council have decided to present to each Institution copies of twenty-two lectures delivered before the Society of Arts, on the results of the Great Exhibition of 1851.

Institutions desiring copies of these works are requested either to apply for them at the Society's House, or to communicate to the Secretary of the Society of Arts the address of an agent in London to whom they may be sent.

## SPECIAL PRIZE.

The Prize of Twenty Pounds (placed at the disposal of the Council of the Society of Arts for this purpose, by the Rev. F. Trench and J. MacGregor, Esq.,) and the Society's Silver Medal, offered for a Writing Case suited for the use of soldiers, sailors, emigrants, &c., will be awarded according to the following conditions:—

1. *Weight*.—None will be received weighing above five ounces when empty.
2. *Size*.—The size in length and breadth must not exceed that necessary to hold note paper.
3. *Ink*.—The case must not contain ink in a fluid state.
4. *Durability*.—It must be made of a substance not liable to be spoiled by wet, and which will protect the contents from injury.
5. *Cheapness*.—The retail price, with guaranteed supply, must not exceed 1s. 6d.

Competitors are desired to take notice that the Council reserve to themselves the right of withholding the prize should there be no article of sufficient merit brought under their notice.

The articles sent in for competition must be delivered at the Society's House, Adelphi, London, W.C., on or before the 1st of January, 1859.

## FINANCIAL PRIZE ESSAY.

Mr. J. T. Danson, Fellow of the Statistical Society; Mr. Charles Neate, Professor of Political Economy in the University of Oxford; and Mr. Jacob Waley, Professor of Political Economy in University College, London, the adjudicators appointed by the Council of the Society of Arts, have reported that they have unanimously selected the Essay marked E. C. S., as deserving the award of the Prize of Two Hundred Guineas, placed in the hands of Council by Mr. Henry Johnson.

As the Council are not meeting at this season of the year, the Chairman, in the presence of the Secretary, has opened the envelope bearing the above motto, and declares that the successful author of the Essay is Mr. Edward Capps, 7, Cheshunt-terrace, Grange-road, Bermondsey.

## ARTISTIC COPYRIGHT.

The petition from the Society of Arts, as well as one signed by Members of the Artistic Copyright Committee and others interested in the production of works of Fine Art, were presented to the House of Lords, on Monday last, by Lord Lyndhurst. The petitions were ordered to be referred to a Select Committee, the members of which were at once appointed.

## EXAMINATIONS.

The following is a list of the members of the Sussex Local Board of Examiners, as now finally constituted, for the purpose of carrying into effect in Sussex the Examinations of the Society of Arts and the "Middle-Class Examinations" established by the Universities of Oxford and Cambridge:—

Airey, George, Steyning.	Hawkins, Rev. E. C., Brighton.
Allen, Rev. John, Brighton.	Howell, James, Brighton.
Andrews, John, Brighton.	Jardine, Rev. Dr., Brighton.
Attree, W. W., Recorder of Hastings.	Johnstone, Rev. H. I., Brighton.
Banks, John, jun., Hastings.	King, Dr. Wm., Brighton.
Beard, Dr. C. J., Brighton.	King, W. G., Brighton.
Bessant, R. B., Brighton.	Long, Prof. Geo., Brighton.
Bigge, A., Stipendiary Magistrate, Brighton.	Lower, M. A., Lewes.
Blencowe, R. W., the Hooke, Lewes.	Merrifield, Fred., Brighton.
Brigden, John, Brighton.	Morris, Rev. Dr., Brighton.
Burrows, J. C., Mayor of Brighton.	Newton, Rev. J., Brighton.
Carey, Rev. Dr., Brighton.	Olding, William, Brighton.
Carpenter, Charles, Brunswick-square, Brighton.	Otter, Rev. Archdeacon, Cowfold.
Cobb, George, Brighton.	Paris, George De, Brighton.
Cole, J. H., Hastings.	Penley, M., Brighton.
Cox, A., Clarence-square, Brighton.	Peto, John, Brighton.
Creak, Rev. Albert, Brighton.	Phillips, M. L., Brighton.
Creasy, Professor, London.	Phillips, Barclay, Hon. Sec., Brighton.
Drummond, Rev. S. R., Brighton.	Ricardo, Moses, Brighton.
Garbett, Rev. Archdeacon, Clayton.	Rickards, P. S., Brighton.
Griffith, Rev. J., Brighton.	Rock, James, Mayor of Hastings.
Grix, John, East Ashling, Chichester.	Savage, W. D., Brighton.
Harper, W. H., Shoreham.	Sleight, Wm., Brighton.
	Smithe, Wm. Forster, Brighton.
	Turrell, H. S., Brighton.
	Wanfor, T. W., Brighton.
	Wright, Robert, Lancing.

## EXAMINATIONS, 1858.

The following papers, set at the Society's Final Examinations, in May last, are concluded from page 554 :—

## ENGLISH LITERATURE.—CHAUCER.

ONE HOUR AND A HALF ALLOWED.

## DIVISION I.

1. Write in modern English the following passage :—

A good wif was ther of beside Bathe,  
But she was som del defe, and that was scathe.  
Of cloth making she hadde swiche an haunt,  
She passed hem of Ipres, and of Gaunt.  
In all the parish wif ne was ther non,  
That to the offering before hire shulde gon,  
And if ther did, certain so wroth was she,  
That she was out of alle charitee.  
Hire coverchiefs weren ful fine of ground ;  
I dorste sweve, they weyeden a pound ;  
That on the Sonday were upon hire hede.  
Hire hosen weren of fine scarlet rede,  
Ful streite yteyed, and shoon ful moist and newe.  
Bold was hire face, and fayre and rede of hew.  
She was a worthy woman all hire live,  
Housbondes at the chirche dore had she had five,  
Withouten other compaignie in youthe.  
But therof nedeth not to speke as nouthe.

447—464.

2. Mark the feet. Can you give any rules for the pronunciation of the final *e* ?

3. Give Chaucer's declension of the words *he* and *she*, both singular and plural ?

4. Write out as much as you can of the description of the Person in the words of the original.

5. Explain the words :—Chevalrie, arwes, couthe, coude, sote, yaf, purfiled, yeddinges, swiche, limitour, pense, gat-tothed, lewed, achatours, adradde, arette, o, unces, wood, digne, barres.

6. Give all the parts of the verb "to be" that you find in Chaucer.

7. Explain the phrases, "at your aller cost ;" "fayn wolde I do you mirthe and I wiste how ;" "and have a thank and yet a cote and hood ;" "and yet this manciple sette hir aller cappe ;" "ne was not worldly to have an office."

## DIVISION II.

1. Give an account of Chaucer's life, and some notice of the author whom he is said to have imitated.

2. Write in modern English the following passage :—

At Alisandre he was whan it was wonne.  
Ful often time he hadde the bord begonne,  
Aboven alle nations, in Pruce.  
In Lettowe hadde he reysed and in Ruce,  
No cristen man so ofte of his degre.  
In Gernade at the siege eke hadde he be  
Of Algesir, and ridden in Bulmarie.  
At Leyes was he, and at Satalie,  
Whan they were wonne ; and in the Grete see  
At many a noble armee hadde he be.  
At mortal batailles hadde he ben fittene,  
And foughten for our faith at Tramissene  
In listes thries, and ay slain his fo.

51—63.

3. Give the situation of the places mentioned above, and explain the historical allusions.

4. Give instances of sarcasm in this Prologue.

5. Write out the description of the Squire. What was the difference in social rank between him and the Frankleyn ?

## SPENSER.

ONE HOUR AND A HALF ALLOWED.

## DIVISION I.

1. Write in prose order and in modern English the following :—

Thou, wretched man, of death hast greatest need,  
If in true ballaunce thou wilt weigh thy state ;  
For never Knight, that dared warlike deed,  
More luckless dissaventures did amate :  
Witnes the dungeon deepe, wherein of late  
Thy life shutt up for death so oft did call ;  
And though good lucke prolonged had thy date,  
Yet death then would the like mishaps forestall,  
Into the which hereafter thou maist happen fall.

Why then doest thou, O man of sin, desire  
To draw thy dayes forth to their last degree ?  
Is not the measure of thy sinfull hire  
High heaped up with huge iniquitee,  
Against the day of wrath, to burden thee ?  
Is not enough, that to this Lady mild  
Thou falsed hast thy faith with perjuree,  
And sold thy self to serve *Duessa* vild,  
With whom in all abuse thou hast thy selfe defild ?

Book I. *Canto* ix. 45, 46.

2. Explain the allusions in this passage to the previous part of the Book.

3. Give the substance of the description of the palace of *Lucifera*.

4. What is the meaning of the words :—*Preace*, tho, yplight, ydrad, aread, canon, make (the noun), seely, portesse, stowre, darrayne, prowrest, gree, hurtlen ?

5. Mention the most striking similes in the First Book.

6. Compare the accounts of *Lucifera*, and *Orgoglio*, and explain the meaning symbolized by each.

7. Describe the metrical construction of Spenser's stanza.

8. Write out the description of Arthur, as nearly as you can in the words of the original.

## DIVISION II.

1. Give a short account of Spenser's life.

2. What fault is inherent in the Allegory on which the Faery Queen is founded ?

3. From what source does Spenser derive his peculiar metre ?

4. What was Spenser's plan for his whole poem ? And how much of it is executed ?

5. Mention any imitations of Chaucer by Spenser, or of Spenser by later poets.

## SHAKESPEARE.

THREE HOURS ALLOWED.

## DIVISION I.

1. Explain the following passages, giving the context in which each occurs, and mentioning any various reading :

Thou, nature, art my goddess ; to thy law  
My services are bound. Wherefore should I  
Stand in the plague of custom ; and permit  
The curiosity of nations to deprive me,  
For that I am some twelve or fourteen moonshines  
Lag of a brother ?

I must change names at home, and give the distaff  
Into my husband's hands.

That nature which contemns its origin  
Cannot be bordered certain in itself.

For this business,  
It touches us as France invades our land  
Not bolds the king.

2. Write the character of Edgar in *King Lear*, supporting your description by references or quotations.

3. Give the plot of the concluding Act.

4. Explain the following passages, giving the context in which each occurs, and mentioning any variation in the reading:—

For the apparel oft proclaims the man ;  
And they in France of the best rank and station  
Are of a most select and generous chief in that.

Do not believe his vows; for they are brokers;  
Not of the eye which their investments show.

Marry, sir, here's my drift,  
And, I believe, it is a fetch of warrant.

Pray God, your voice, like a piece of uncurrent gold  
Be not cracked within the ring.

That monster, custom, who all sense doth eat,  
Of habits devil, is angel yet in this,  
That to the use of actions fair and good  
He likewise gives a frock or livery.

He, being remiss,  
Most generous, and free from all contriving,  
Will not peruse the foils.

5. Describe the character of Laertes.

6. Trace the steps by which the Ghost is introduced into the play, and describe the part that he plays.

7. Explain the following passages, giving the context in each case, and mentioning any various readings:—

For when my outward action doth demonstrate  
The native act and figure of my heart  
In complement extern, 'tis not long after  
But I will wear my heart upon my sleeve  
For daws to peck at.

Whereof by parcels she had something heard,  
But not intently.

One that excels the quirks of blazoning pens,  
And in the essential vesture of creation  
Does tire the ingener.

Exchange me for a goat,  
When I shall turn the business of my soul  
To such exsufflicate and blow'd surmises,  
Matching thy inference.

How have I been been behaved, that he might stick  
The small'st opinion on my least misuse.

8. Describe the steps by which Iago works out his purpose of deceiving Othello.

#### DIVISION II.

1. From what sources is Shakespeare supposed to have obtained the materials of his plots for *Othello*, *King Lear*, and *Hamlet*?

2. Compare the characters of Kent and Gloucester in *King Lear*.

3. What supernatural machinery does Shakespeare use? Compare his use of Heathen Mythology with Milton's.

4. What dramatists of note preceded Shakespeare? Did he ever copy any of them?

5. How far is a dramatic poet bound to satisfy our notions of justice? Examine with this view the conclusion of *King Lear*. Does the moral effect of a play depend on its representing good as always triumphant?

6. Compare the three heroines of these tragedies. Examine how far each character is adapted to the interest attached to it in the play.

7. What is Shakespeare's object in interweaving comic scenes and characters into his tragedies? Mention any instance that you remember, and comment upon it in detail.

#### BACON.

ONE HOUR AND A HALF ALLOWED.

##### DIVISION I.

1. How does Bacon prove that the Syllogism is not sufficient for the investigation of Nature?

2. Mention any remarkable instances of the *Idola specus*. Under which head will common superstitions fall? And under which common rumours?

3. Distinguish accurately between *Idola tribus* and *Idola fori*, and give instances to illustrate your distinction.

4. Explain what Bacon means by saying that a recurrence to final causes has corrupted philosophy.

5. What does Bacon say of the different philosophical effects produced by the systems of Aristotle and of Plato? What does he mean by comparing empirical philosophers to ants, dogmatical to spiders?

6. By what instances does Bacon attempt to show that there is hope for science in the hidden powers of nature?

##### DIVISION II.

1. Give a sketch of the scheme of which the *Novum Organum* was intended to be a part.

2. Give instances of Bacon's remark that men prefer saving their axioms by some frivolous distinction to mending them.

3. What is the difference between *lucifera* and *fructifera experimenta*? Give instances of both kinds, and show that in the end the *lucifera* are also *fructifera*.

4. Give some account of that philosophy of the Schoolmen which Bacon's system was intended to overthrow.

5. Give a sketch of the state of science when Bacon wrote.

6. Bacon says, that "Forms are the figments of the human mind, unless we may call the laws of the action of matter by the name of forms." Explain what is meant here by the word forms.

7. What did the Schoolmen mean by occult qualities? How much truth was wrapped up in this phrase? Illustrate your answer by instances.

#### MILTON.

ONE HOUR AND A HALF ALLOWED.

1. Explain the following passages, giving the context in each case:—

They left me then when the grayhooded even,  
Like a sad votarist in palmer's weed,  
Rose from the hindmost wheels of Phœbus' wain.

I have often heard  
My mother Circe with the Sirens three  
Amid the flowery kirtled Naiades,  
Culling their potent herbs and baleful drugs;  
Who as they sung would take the prisoned soul  
And lap it in Elysium; Scylla wept  
And chid her barking waves into attention,  
And fell Charybdis murmured soft applause.

Not that Nepenthes which the wife of Thone  
In Egypt gave to Jove born Helena.

And what if seventh to these  
The planet earth, so steadfast though she seem,  
Insensibly three different motions move?  
Which else to several spheres thou must ascribe,  
Moved contrary to thwart obliquities,  
Or save the sun his labour, and that swift  
Nocturnal and diurnal rhomb suppos'd,  
Invisible else above all stars, the wheel  
Of day and night. *Paradise Lost, viii.*

Spot more delicious than those gardens feigned  
Or of revived Adonis, or renowned  
Alcinous, host of old Laertes' son;  
Or that not mystic where the sapient king  
Held dalliance with his fair Egyptian spouse.

As when two polar winds blowing adverse  
Upon the Cronian sea, together drive  
Mountains of ice that stop the imagined way  
Beyond Ptolema eastward, to the rich  
Cathaian coast.

2. Give the argument of the eleventh Book of *Paradise Lost*.

3. Write out, as nearly as you can in the words of the original, Milton's description of the first day's creation.

4. Explain the following words, and quote, where you can, lines in which they occur:—purpled, crisped, soothest, bolt (verb), bosky, empyrean, Pegasean, epicycle, maugre, budge, emprise, welkin.

5. By what argument does Milton make the serpent persuade Eve, and Eve persuade Adam?

6. What distinction of character is maintained between the two brothers in *Comus*?

#### DIVISION II.

1. Give a short account of the life of Milton and of the date and occasion of each of his writings.

2. Mention any critics who have written on Milton's poems and the tenor of their criticisms.

3. What rules of metre does Milton observe? Quote passages to show the variety of his rhythm.

4. Quote instances of unusual grammatical constructions. State in each case, if you can, the source from whence he obtained them.

5. Quote any allusions that occur in the *Paradise Lost* to Milton's personal history, or to the events of the day.

6. Compare the different angels in *Paradise Lost*, and point out the distinctions in their several characters.

#### POPE.

ONE HOUR AND A HALF ALLOWED.

#### DIVISION I.

1. Explain the following passages, giving the context in each case:—

When the dull ox, why now he breaks the clod,  
Is now a victim, and now Egypt's god.

Reason the card, but passion is the gale.

The fiery soul abhorred in Catiline,  
In Decius charms, in Curtius is divine.

See Falkland dies the virtuous and the just:  
See godlike Turenne prostrate on the dust:  
See Sidney bleeds amid the martial strife.

Heroes are much the same, the point's agreed,  
From Macedonia's madman to the Swede.

To all beside as much an empty shade  
An Eugene living, as a Cæsar dead:  
Alike or when or where they shone or shine,  
Or on the Rubicon or on the Rhine.

2. Describe Pope's theory of the Master or Ruling passion.

3. What comparison does Pope make between Reason and Instinct?

4. What is Pope's account of the origin of Civil Government?

5. Write out, in the words of the original, the ironical command in the opening of the second Epistle, bidding man attempt all knowledge. Explain the allusions in the passage.

6. Mention any lines in the *Essay on Man* which have become common quotations, and give the context in which each occurs.

#### DIVISION II.

1. In what sense is it true that Pope is a very correct poet?

2. What kind of influence did Pope exert on succeeding writers? How far was that influence different from that of Dryden?

3. From whom is Pope said to have obtained the theory on which the *Essay on Man* is founded? What are the obvious objections to that theory?

4. Point out real or apparent inconsistencies in the *Argument*, and, when possible, defend the Poet from the charge.

5. It has been said that the *Essay on Man* tends to the denial of a future state. Examine this statement.

6. Mention and characterize the most remarkable Poets that have directly imitated Pope.

7. Describe briefly Pope's other writings.

#### BURKE.

ONE HOUR AND A HALF ALLOWED.

#### DIVISION I.

1. Narrate the historical facts which justify the following statements:—

The Babylonian, Assyrian, Median, and Persian monarchies must have poured out seas of blood in their formation and in their destruction.

The kings of Syria and of Egypt, the kings of Pergamus and Macedon, without intermission worried each other for above two hundred years.

What an Aceldama, what a field of blood Sicily has been in ancient times!

Denmark sought a refuge from the oppression of its nobility in the stronghold of arbitrary power.

Athens was the city which banished Themistocles, starved Aristides, forced into exile Miltiades, drove out Anaxagoras, and poisoned Socrates.

2. Give the arguments which Burke founds on the state of the law to prove the mischief of artificial society.

3. Give the substance of Burke's account of the Passion of Sympathy.

4. "I know of nothing sublime, which is not some modification of power." How does Burke illustrate this position?

5. What qualities does Burke consider to make up our notion of Beauty? Give his argument in regard to any one of them.

6. Give the substance of Burke's examination of Locke's opinion concerning darkness.

7. What does Burke remark on the effect of Words?

8. Mention Burke's objections to the project of giving Representatives to our American provinces.

9. What does Burke say on the maxim, "Not men, but measures?"

10. Write out, as nearly as you can in the words of the original, the peroration of the *Reflections on the Revolution in France*.

11. What was Necker's project for regulating the French finances? What are Burke's remarks on that project?

12. On what basis did the French Revolutionists, according to Burke, propose to rest their constitution? Give Burke's argument against their plan.

## DIVISION II.

1. Give a sketch of Burke's life, and a short account of his writings, and mention the names of his most distinguished Literary and Political contemporaries.

2. What is the purpose of the Vindication of Natural Society? Would the argument be always effectual?

3. What other theories of the nature of Beauty have been proposed? And by whom? Compare any one of them with that advocated by Burke.

4. Mention the most remarkable characteristics of Burke's style? and illustrate your answer by quotations.

5. Quote striking similes or other figures of that kind from Burke's writings.

6. How far can it be said that the progress of the French Revolution changed the tenor of Burke's political sentiments? What effect had that Revolution on other great minds that witnessed it?

7. What was the nature of the French Parliament abolished by the Revolution? To what purpose would Burke have had them applied? Is there anything similar in our own constitution.

8. How far have Burke's anticipations in regard to France been realized since he wrote?

## WORDSWORTH.

ONE HOUR AND A HALF ALLOWED.

## DIVISION I.

1. Illustrate the following passage by a short account of the mythology and histories to which it refers:—

With unrivalled skill,  
As nicest observation furnished hints  
For studious fancy, did his hand bestow  
On fluent operations a fixed shape;  
Metal or stone, idolatrously served.  
And yet—triumphant o'er this pompous show  
Of Art, this palpable array of Sense,  
On every side encountered; in despite  
Of the gross fictions chanted in the streets  
By warring Rhapsodists; and in contempt  
Of doubt and bold denial hourly urged  
Amid the wrangling Schools—a SPIRIT hung,  
Beautiful Region! o'er thy Towns and Farms,  
Statues and Temples, and memorial Tombs.

2. Narrate the story of Ellen from the "Churchyard among the Mountains."

3. Give the argument of "Despondency corrected."

4. Write out, as nearly as possible in the words of the original, the description of the Raven, heard as she flies across the valley in which the Solitary was dwelling.

5. Explain the allusions in the following:—

Egyptian Thebes,  
Tyre by the margin of the sounding waves,  
Palmyra, central in the Desert, fell;  
And the Arts died by which they had been raised.  
—Call Archimedes from his buried Tomb  
Upon the plain of vanished Syracuse,  
And feelingly the sage shall make report  
How insecure, how baseless in itself,  
Is the Philosophy whose sway depends  
On mere material instruments.

6. Give the substance of the comparison made by the Poet between the manufacturing and agricultural life.

7. Write out or give the substance of any remarkable description of scenery that you may remember in the "Excursion." What are the chief characteristics of Wordsworth's descriptions of scenery?

8. Describe the feeling said to have been excited by the beginning and progress of the French Revolution.

9. Wordsworth rarely uses similes. Quote any that you can remember.

## DIVISION II.

1. Wordsworth is said to be sometimes prosy. Explain what is meant by this. Give instances; and examine how much, if any, truth there is in the charge.

2. What is Wordsworth's avowed principle in regard to poetic diction? Give instances in which he seems to have carried it too far. Give instances in which he seems to have himself transgressed it.

3. What critics have attacked Wordsworth in prose or poetry? And what has been the tenor of their criticism?

4. Give a classified list of Wordsworth's writings, and remark upon the difference observable between his later and earlier poetry.

5. What is the moral purpose of the "Excursion"? And how far is it attained?

6. Describe the view seen by the Solitary after the search for the man lost in the mountains. What is the purpose with which it is introduced here by the Poet?

## BUTLER.

ONE HOUR AND A HALF ALLOWED.

## DIVISION I.

1. By what argument does Butler establish the immortality of the soul?

2. On what basis does Butler discuss the question of necessity? Point out the advantage of choosing such a basis.

3. How far does a belief in the moral government of God go beyond a belief in his government by Rewards and Punishments? If the latter be established, what additional proof is needed to establish the former?

4. What use does Butler make of the limited scope of our faculties as an argument in favour of religion?

5. What objections does Butler anticipate as likely to be made against his whole argument? And how does he answer them?

6. How does Butler answer the presumption from Analogy against miracles?

7. Explain the distinction which Butler draws between self-love and the particular passions.

8. How does Butler answer the objection to his system, that vice is as natural as virtue?

9. Give Butler's proof that conscience is a faculty superior in kind to the other faculties.

## DIVISION II.

1. What objection may be made to the very groundwork of the Analogy? And how would Butler answer it.

2. How does Butler deal with the supposed case of a man convinced that virtue does not really tend to happiness, or vice to misery? And how does he contrast his system with that of Shaftesbury in this respect?

3. Butler alludes in his preface to the Epicurean system of Philosophy. Give an account of that system. What modern writers belong more or less to the same school?

4. What answer might be made to Butler's argument for the indivisibility of the soul? And what to his inference thence drawn of the immortality of the soul?

5. What other English writers on morals may be considered as followers or as opponents of Butler?

6. Is conscience considered by Butler as a moral or an intellectual faculty? What philosophical advantage is gained and what lost by his determination of this point?

## LATIN AND ROMAN HISTORY.

THREE HOURS ALLOWED.

Candidates are not allowed to work more than *two* out of the *four* Sections into which this Paper is divided, and are not expected to answer more than six questions in Section III. or IV.

## SECTION I.

Translate literally into English prose:—

Nunc, Patres conscripti, ego mea, video, quid intersit. Si eritis secuti sententiam C. Cæsaris: quoniam hanc in republica viam, quæ popularis habetur, secutus est, fortasse minus erunt, hoc auctore et cognitore hujusce sententiæ, mihi populares impetus pertimescendi: sin illam alteram; nescio, an amplius mihi negotii contrahatur. Sed tamen meorum periculorum rationes utilitas reipublicæ vincat. Habemus enim a C. Cæsare, sicut ipsius dignitas et majorum ejus amplitudo postulabat, sententiam, tanquam obsidem perpetuæ in rempublicam voluntatis. Intellectum est, quid intersit interlenitatem concionatorum et animum vere popularem, saluti populi consulentem. Video de istis, qui se populares haberi volunt, abesse non neminem, ne de capite videlicet civium Romanorum sententiam ferat. Is et nudius tertius in custodiam cives Romanos dedit, et supplicationem mihi decrevit, et indices hesternò die maximis præmiis affecti. Jam hoc nemini dubium est, qui reo custodiam, quæstori gratulationem, indici præmium decrevit, quid de tota re et causa judicarit.

1. Parse fully, auctore—pertimescendi—negotii—concionatorum—videlicet—hesterno.

2. Account for the mood of vincat—intersit—ferat—judicarit.

3. Give the perfect, supine, and infinitive of eo—gaudeo—fero—edo.

4. Explain briefly—

Patres conscripti.

Populares.

De capite sententiam ferat.

Supplicationem.

Quæstori.

## SECTION II.

Translate into English prose:—

Hæc dum Dardanio Æneæ miranda videntur, Dum stupet, obtutuque hæret defixus in uno, Regina ad templum, forma pulcherrima Dido, Incessit, magna juvenum stipante caterva. Qualis in Eurotæ ripis, aut per juga Cynthi Exerces Diana choros, quam mille secutæ Hinc atque hinc glomerantur Oreades; illa pharetram Fert humero, gradiensque deas supereminet omnes; Latonæ tacitum pertendant gaudia pectus: Talis erat Dido, talem se læta ferebat Per medios, instans operi regnisque futuris. Tum foribus divæ, media testudine templi, Sæpta armis, solioque alte subnixâ, resedit. Jura dabat legesque viris, operumque laborem Partibus æquabat justis, aut sorte trahebat.

1. Parse fully, giving the rules of Syntax where necessary, Æneæ—miranda—forma—stipante—gradiens—ferebat—operi—subnixâ—sorte.

2. Conjugate the verbs from which we have, videntur—hæret—supereminet—instans—resedit—trahebat.

3. Decline the pronoun *se*; and state the difference between the following:—

Sui amicus.

Ejus amicus.

Suus amicus.

4. What is meant by a deponent verb? What peculiarity is there in its participles? Give examples.

## SECTION III.

1. What events in Roman History are connected with the following dates, B.C. 509—451—395—366—280—264—202—146?

2. Give a short account of Servius Tullius; and describe the changes in the constitution ascribed to him.

3. Compare the *legendary* and *historical* accounts of the war with Porsena.

4. What events led to the first appointment of Tribunes of the Plebs? Describe the duties and powers of these officers.

5. Who was Spurius Cassius? Explain the object of the law which was named after him.

6. Mention the causes, and results, of the great Latin war.

7. Give the dates, and state the objects, of the

Lex Publilia.

Lex Canuleia.

Lex Hortensia.

8. Mention some of the principal incidents in the *third* Samnite war.

9. Describe the course of events in the second Punic war, after the battle of Cannæ.

10. "Ille triumphata Capitolia ad alta Corintho Victor aget currum, cæsis insignis Achivis."

—Æn. vi.

Explain the allusion in this passage; and state under what circumstances, and with what results, Rome came into collision with Greece.

## SECTION IV.

1. Mention, with dates, the chief events in Roman History in *one* of the following periods:

i. B.C. 65 to B.C. 42.

ii. B.C. 42 to B.C. 31.

2. Give an account of the troubles under the Gracchi.

3. Sketch the life of

Scipio Africanus,

Marius, or,

Cato, the Censor.

4. Write a short account of the Jugurthine war.

5. Describe the war with

Viriathus,

Sertorius, or,

Spartacus.

6. Where was Pergamus? How did it come into the possession of the Romans? Mention some of the immediate, and ultimate, results of this addition to their territories.

7. Name the members of the two Triumvirates, and mention the fate of each of them.

8. What were the chief features in the legislation of Sylla? State the objects which he professed to have in view.

9. What was the extent of the Roman dominions at the death of Augustus? How were the Roman provinces governed?

10. Gibbon describes the system of imperial government, under Augustus, as "an absolute monarchy disguised by the forms of a commonwealth." Examine, and explain this statement.

## FRENCH.

THREE HOURS ALLOWED.

## I.

Translate into English *any two*, and *not more than two*, of the following extracts; and answer (in French if possible) the questions respectively appended to each of those two extracts.

(1) From Pascal's *Lettres Provinciales* (Lettre V):—

Ils (les Jésuites) ont assez bonne opinion d'eux-mêmes pour croire qu'il est utile et comme nécessaire au bien de la religion que leur crédit s'étende partout, et qu'ils gouvernent toutes les consciences. Et, parce que les maximes évangéliques et sévères sont propres pour gouverner quelques sortes de personnes, ils s'en servent dans ces occasions où elles leur sont favorables. Mais comme ces mêmes maximes ne s'accordent pas au dessin de la plupart des gens, ils les laissent à l'égard de ceux-là, afin d'avoir de quoi satisfaire tout le monde. C'est pour cette raison qu'ayant affaire à des personnes de toutes sortes de conditions et de nations si différentes, il est nécessaire qu'ils aient des casuistes assortis à toute cette diversité.

1. Give a biographical sketch of Pascal: name his principal works.

2. State what you know of the *Lettres Provinciales*; explain the title and object of the work, its style and spirit, and the effect which it produced when first published.

(2.) From Racine's *Britannicus* (Acte IV. Scène 3):—

*Néron.* Je ne vous flatte point, je me plaignais de vous, Burrhus; je vous ai crus tous deux d'intelligence; Mais son inimitié vous rend ma confiance.

Elle se hâte trop, Burrhus, de triompher: J'embrasse mon rival, mais c'est pour l'étouffer.

*Burrhus.* Quoi, Seigneur!

*Néron.* C'en est trop; il faut que sa ruine Me délivre à jamais des fureurs d'Agrippine:

Tant qu'il respirera, je ne vis qu'à demi,

Elle m'a fatigué de ce nom ennemi;

Et je ne prétends pas que sa coupable audace

Une seconde fois lui promette ma place.

*Burrhus.* Elle va donc bientôt pleurer Britannicus?

*Néron.* Avant la fin du jour je ne le craindrai plus.

*Burrhus.* Et qui de ce dessein vous inspire l'envie?

*Néron.* Ma gloire, mon amour, ma sûreté, ma vie.

*Burrhus.* Non, quoi que vous disiez, cet horrible dessein Ne fut jamais, seigneur, conçu dans votre sein.

1. Give a biographical sketch of Racine, with the names of his principal plays.

2. Explain briefly the plot of *Britannicus*.

(3.) From Molière's *Bourgeois Gentilhomme* (Acte II. Scène 6):—

*M. Jourdain.* Ah! monsieur, je suis fâché des coups qu'ils vous ont donnés.

*Le Maître de Philosophie.* Cela n'est rien. Un philosophe sait recevoir comme il faut les choses; et je vais composer contre eux une satire du style de Juvénal, qui les déchirera de la belle façon—Laissons cela. Que voulez-vous apprendre?

*M. Jourdain.* Tout ce que je pourrai; car j'ai toutes les envies du monde d'être savant; et j'enrage que mon père et ma mère ne m'aient pas fait bien étudier dans toutes les sciences, quand j'étais jeune.

*Le Maître de Philosophie.* Ce sentiment est raisonnable; *nam, sine doctrina, vita est quasi mortis imago*—Vous entendez cela, et vous savez le latin, sans doute?

*M. Jourdain.* Oui; mais faites comme si je ne le savais pas. Expliquez-moi ce que cela veut dire.

*Le Maître de Philosophie.* Cela veut dire que, sans la science, la vie est presque une image de la mort.

*M. Jourdain.* Ce latin-là a raison.

*Le Maître de Philosophie.* N'avez-vous point quelques principes, quelques commencements des sciences?

*M. Jourdain.* Oh! oui, je sais lire et écrire.

*Le Maître de Philosophie.* Par où vous plaît-il que nous commençons? Voulez-vous que je vous apprenne la logique?

*M. Jourdain.* Qu'est ce que c'est que cette logique?

*Le Maître de Philosophie.* C'est elle qui enseigne les trois opérations de l'esprit.

\* \* \* \* \*

*M. Jourdain.* Voilà des mots qui sont trop rébarbatifs. Cette logique-là ne me revient point. Apprenons autre chose qui soit plus joli.

*Le Maître de Philosophie.* Voulez-vous apprendre la Morale.

*M. Jourdain.* La morale?

*Le Maître de Philosophie.* Oui.

*M. Jourdain.* Qu'est ce qu'elle dit, cette morale?

*Le Maître de Philosophie.* Elle traite de la félicité, enseigne aux hommes à modérer leurs passions, et.....

*M. Jourdain.* Non; laissons cela. Je suis bilieux comme tous les diables, et il n'y a morale qui tienne: je me veux mettre en colère tout mon soûte, quand il m'en prend envie.

1. Give a biographical sketch of Molière, with a list of his works.

2. Explain the plot of the *Bourgeois Gentilhomme*.

(4.) From Boileau's *Lutrin* (Chant 1):—

La Discorde, à l'aspect d'un calme qui l'offense,

Fait siffler ses serpents, s'excite à la vengeance:

Sa bouche se remplit d'un poison odieux,

Et de longs traits de feu lui sortent par les yeux.

Quoi! dit-elle d'un ton qui fit trembler les vitres,

J'aurai pu jusqu'ici brouiller tous les chapitres,

Diviser Cordeliers, Carmes et Célestins;

J'aurai fait soutenir un siège aux Augustins;

Et cette église seule, à mes ordres rebelle,

Nourrira dans son sein une paix éternelle!

Suis-je donc la Discorde? et, parmi les mortels

Qui voudra désormais encenser mes autels?

A ces mots d'un bonnet couvrant sa tête énorme,

Elle prend d'un vieux chantre et la taille et la forme;

Elle peint de bourgeois son visage guerrier,

Et s'en va de ce pas trouver le trésorier.

1. Give a biographical sketch of Boileau; name his principal works.

2. Explain the subject of the *Lutrin*, and also the names of Cordeliers, Carmes, Célestins, and Augustins, introduced in the above passage.

(5.) From Guizot's *Histoire de la Civilisation en Europe* (Léçon I):—

Il n'est presque aucune grande idée, aucun grand principe de civilisation qui, pour se répandre partout, n'ait passé d'abord par la France.

C'est qu'il y a dans le génie français quelque chose de sociable, de sympathique, quelque chose qui se propage, avec plus de facilité et d'énergie que le génie de tout autre peuple: soit notre langue, soit le tour de notre esprit, de nos mœurs, nos idées sont plus populaires, se présentent plus clairement aux masses, y pénètrent plus facilement; en un mot, la clarté, la sociabilité, la sympathie sont le caractère particulier de la France, de sa civilisation, et ces qualités la rendaient éminemment propre à marcher à la tête de la civilisation Européenne.

Lors donc qu'on veut étudier l'histoire de ce grand fait, ce n'est point un choix arbitraire ni de convention, que de prendre la France pour centre de cette étude; c'est au contraire se placer, en quelque sorte, au cœur de la civilisation elle-même, au cœur du fait qu'on veut étudier.

1. State what you know of M. Guizot's literary career; name his principal works.

2. Explain as fully as possible the meaning which M. Guizot attaches to the word *Civilization*.

## II.

1. Mention briefly, with dates, the most important events of the reigns of Clovis and Charlemagne.

2. Explain the following historical expressions: *Loi salique*, *Capitulaires de Charlemagne*, *Etats-généraux*, *Progamatique sanction* (Charles VII), *Edict de Nantes*, *Serment du Jeu du Paume*.



## III.

1. This sentence, *Je crains qu'elle ne se soit foulé le poignet*, suggests seven different remarks, as compared with the English, *I fear she sprained her wrist*. What are those remarks, each of which bears upon an important point of the French syntax?

2. Mention with examples the cases when the English *to be* must be changed into *avoir* in French, and also when *to have* must be changed into *être*.

3. Write a letter in French, of about twenty lines, upon any subject you please, with as many idiomatic expressions as possible.

## GERMAN.

THREE HOURS ALLOWED.

## SECTION I.

Translation from German into English:—Every Candidate is expected to translate one of the two following passages; and to answer a few of the grammatical questions appended to the first.

1. Der Erfolg der Schlacht von Soor war, dass Friedrich's Absichten für die Beendigung des Feldzuges keine weiteren Hindernisse im Weg standen. Denn zu neuen Unternehmungen in Böhmen war er wenig geneigt. Ehrenhalber blieb er mit seiner Armee fünf Tage lang auf dem Schlachtfelde stehen. Dann wandte er seinen Marsch nach Trautenau, die dortige Gegend noch auszufouragiren. Von da ging er nach Schlesien zurück, dessen Boden am 19. October betreten ward. Der Marsch durch die Engpässe der Gebirge war nicht ohne Gefechte vor sich gegangen, indem die preussische Armee von leichten ungarischen Truppen umschwärmt ward; doch blieben die grösseren Verluste dabei auf Seiten der letzteren. Der Haupttheil der Armee wurde in der Gegend von Schweidnitz, unter dem Oberbefehle des Erbprinzen von Dessau, in Cantonirungsquartiere gelegt. Nachdem Friedrich erfahren hatte, dass die österreichische Armee sich in drei Haufen getrennt habe, was erwarten liess, dass auch sie Winterquartiere suchen würde, begab er sich nach Berlin.

*Grammatical questions on the above.*

- (a.) In what case are Absichten, Cantonirungsquartiere, and drei Haufen?
- (b.) Give the infinitives and past participles of standen, blieb, wandte, ging, liess, and begab.
- (c.) Why is the nominative in the second sentence placed after the verb?—State the rule relating to it.
- (d.) What is the past participle of auszufouragiren?
- (e.) Why is *ward*, in the fifth sentence, placed last?
- (f.) Why is it *ward* and not *war*?
- (g.) Why is the participle umschwärmt used without *ge*?
- (h.) Why is the present subjunctive *habe* employed in the last sentence, instead of the imperfect indicative, which would be used in English?

2. Mein guter Stern bewahrte mich davor,  
Die Natter an den Busen mir zu legen.  
Nicht die Geschicke, euer schwarzes Herz  
Klagt an, die wilde Ehrsucht eures Hanses.  
Nichts Feindliches war zwischen uns geschehen,  
Da Kündigte mir euer Ohm, der stolze,  
Herrschwüth'ge Priester, der die freche Hand  
Nach allen Kronen streckt, die Fehde an,  
Bethörte euch, mein Wappen anzunehmen,  
Euch meine Königstitel zuzueignen,  
Auf Tod und Leben in den Kampf mit mir zu gehn.  
Wen rief er gegen mich nicht auf?  
Der Priester Zungen und der Völker Schwert,  
Des frommen Wahnsinns fürchterliche Waffen;  
Hier selbst, im Friedenssitz meines Reichs,  
Blies er mir der Empörung Flammen an,—  
Doch Gott ist mit mir, und der stolze Priester  
Behält das Feld nicht. Meinem Haupte war  
Der Streich gedrohet, und das eure fällt!

## SECTION II.

Translation from English into German:—Not more than ten of the following passages are to be translated by each Candidate. The answers are to be written in English or German characters, but as distinctly as possible.

1. A despot one day asked his prime minister, "What do the people say of my rule?" "Sire," answered the minister, with a significant shrug of the shoulder, "they are silent." The despot was silent too, resolved to govern henceforth for the benefit of his subjects, and not according to his fancy and caprice; and the legend says, he kept his resolution, to the happiness of all parties.

2. A Spartan king used to say, it was royal to do good to one's friends and harm to one's enemies. "It is much more royal," said some one, "to turn one's enemies into friends."

3. What was Alexander, whom we are accustomed to call the Great, a hero, or a madman?

4. Most men judge not according to the real arguments of truth, but according to prejudices; not according to the inner essential standards of good and evil, but solely according to the external appearance, according to the surface of things which strike the eye.

5. There are cases in which no time must be lost, when there must be instantaneous action, when everything depends on moments which quickly pass.

6. Laws are a protection to the good, and a terror only to the bad.

7. Whatever a man considers right, good, and just, that he must and ought to do.

8. With the weak we need no other force than their weakness.

9. A true patriot is also a good man.

10. Where we cease to distinguish, there are the limits of our knowledge.

11. Malice and craft often hide themselves behind the mask of simplicity and good nature; and good-natured weakness often does more harm than decided ill-will.

12. The moon is constantly drawn to the earth, and the earth and other planets to the sun.

13. Why do we prefer being esteemed to being loved?

14. If you cannot be the best, be at least good.

15. Intelligence and knowledge do more harm than good if they are not guided by morality.

16. Italy is the first and almost the only country which, at the very time when it has laboured to make itself again acquainted with the master-pieces of the ancient languages, has also created master-pieces in its own.

17. We all know for certain that for most losses we shall console ourselves in twenty, in ten, in two years. Why then do we not make up our minds to throw away to-day opinions which we shall throw away in twenty years? Why shall I throw away errors of twenty years standing, and not of twenty hours?

18. Having received no letters from India by the last mail, I am somewhat uneasy about my friends there.

19. Not knowing where your uncle resides, I could not write to him.

20. Is your aunt not to go to the continent this summer?

21. She was to have gone there last February.

22. I could not have accompanied her, even if she had asked me.

23. We could not accompany them on account of our being both ill.

24. This parcel is to be sent off immediately.

25. I shall help these boys to write their exercises.

26. Have you not helped them to overcome their difficulties?

27. Without knowing a word of the language, this conceited man presumes to correct those who have spoken and written it from their youth.

28. I intended to read both the works before returning home, but it could not be done.

29. There was much talking but little doing.

30. I depend upon your sending me the dictionary

back again, as soon as you have compared it with your own.

### FREE-HAND DRAWING.

#### FOUR HOURS ALLOWED.

The Local Boards are requested to place the following objects on a Table before the Candidates in Free-hand Drawing:—

A half-pint mug, a wine bottle, and a stone jar, put close together in a triangle.

A Geranium plant.

Candidates in Free-hand Drawing are required to make clear and distinct outlines in chalk or pencil, without indicating the shadows, of the subject given; they may use charcoal and Indian rubber, but not a rule or any instrument. A Candidate may choose either of the three following sets of subjects; and if the time will allow, there is no objection to his drawing more than one set.

#### MANUFACTURED ARTICLES.

1. Draw from knowledge a ball about seven inches in diameter, on a cube of four inches, the cube to be represented with one angle toward the spectator.
2. Draw the door and doorway of the room you are in.
3. Draw an open umbrella from memory.

#### ORNAMENTS.

1. Draw the ball as before given.
2. Draw the plant which is set before you.
3. Design a pattern from the plant which shall be suited for printing or weaving.

#### HUMAN FORM.

1. Draw the ball as before given.
2. Draw, from memory, an eye a nose, and a mouth, separately in profile, the size of life.
3. Draw a nude figure, from memory, about two feet high.

### MECHANICAL OR GEOMETRICAL DRAWING.

#### THREE HOURS ALLOWED.

The drawings and constructions must be neat, distinct, and accurate; the principles employed clearly indicated, but no verbal explanations or numerical calculations admissible.

Each Candidate must draw all his figures on one large sheet of paper.

Not more than two questions from each of the Sections A, B, C, D, may be answered by any candidate.

Five questions well solved from Section E will be held as equivalent to eight from the preceding sections.

One answer from each of A, B, C, D, with two from E, will rank next in value.

Four answers (one to a question in four different sections) are the fewest that can be admitted as constituting a satisfactory examination.

Candidates are advised to consider each question well before proceeding to the construction, and to bear in mind that distinct and accurate drawing is the important point to be attended to.

#### (A) PRACTICAL PLANE GEOMETRY.

1. On a line of two inches as a side, describe a regular pentagon.
2. Construct a square of 3 inches *area*, and a rectangle equal to it, having its sides as 2 : 1.
3. Draw two lines to contain an angle of  $60^\circ$  and a circle of two inches diameter to touch both.
4. On a line of two inches as a chord, describe the segment of a circle to contain an angle of  $120^\circ$ .
5. Draw the circles inscribed, and circumscribing a triangle of 3; 2.5; and 2 inches sides.
6. Draw an ellipse having its axes 3 and 2 inches.

#### (A) PRACTICAL SOLID GEOMETRY, OR ORTHOGRAPHIC PROJECTION.

1. Show by its plan and elevation a line 3 inches long, inclined to the plane of the paper  $30^\circ$ , and having one extremity half an inch from it.
2. Show the plans of three horizontal lines at 1, 2, 3 inches respectively above the plane of the paper, but lying in a plane inclined to it at  $60^\circ$ .
3. Draw the plan and elevation of a square of 2 inches side when two sides are inclined at  $20^\circ$  and  $80^\circ$  to the plane of the paper and one corner in it.
4. A right prism 3 inches long with a regular hexagon of .75 inches side, rests on one edge on the paper, and one face inclined to it at  $25^\circ$ . Show the solid by its plan, and by an elevation on a plane having the horizontal edges inclined to it at  $50^\circ$ .
5. Draw the plan and elevation of a cube of 2.25 inches edge when three of its corners are at 1; 1.6; 2.75 inches above the plane of the paper.
6. A right pyramid 3.5 inches high having a regular pentagon of an inch side for its base has one corner resting on the paper and one edge vertical; show the solid by its plan and elevation.

#### (C) PERSPECTIVE PROJECTION.

N.B. The plane (of projection) of the *picture* is supposed to be vertical, the place of the *eye*, or point of sight, is 6 inches in front of the plane, and 2.5 inches vertically above the horizontal plane.

1. One edge of a square of 2 inches side is in the plane of the picture, and the plane of the square is vertical, but inclined at  $30^\circ$  to the plane of the picture.
2. A regular hexagon of one inch side lies in the horizontal plane, one angle touches the picture and a diameter makes an angle with it of  $20^\circ$ .
3. A cube of 1.5 inches edge, one edge in the plane of the picture, and one face inclined to it at  $20^\circ$  rests on the horizontal plane.
4. A circle of 2 inches diameter lies in the horizontal plane and touches the plane of the picture.

*Note.*—The position, with respect to the eye, of the objects in all these four questions may be assumed at pleasure.

#### (D) SUBJECTS FOR DRAWINGS IN ORDINARY PLAN AND ELEVATION.

1. Design an arch of 20 feet span in stone, the arch-stones to have chamfered edges, and show how they are connected with the horizontal courses of rusticated masonry. Scale,  $\frac{1}{16}$ .
2. Show three courses of a brick-wall, two-and-a-half bricks thick, with the proper bond in plan and elevation. Scale  $\frac{1}{16}$ .
3. Draw the timber truss for a foot-bridge of 30 feet span. Scale,  $\frac{1}{16}$ .
4. Show how a beam of 7 by 10 inches may be best scarfed. Scale,  $\frac{1}{4}$ .
5. Show how the double queen post, the tie beams and struts of a roof are framed together, and the form of the iron straps or stirrups. Scale,  $\frac{1}{4}$ .
6. Show the mode of uniting the crank and crank-rod of any machine, or part of one. Scale,  $\frac{1}{4}$ .
7. Draw an octagonal nut for a two-inch screw bolt. Scale,  $\frac{1}{4}$ .
8. Draw a chair for a rail, with the mode of keying the rail in. Scale,  $\frac{1}{4}$ .

#### (E) QUESTIONS FOR SOLUTION FOR CANDIDATES WITH MORE THAN AN ELEMENTARY KNOWLEDGE OF GEOMETRY.

1. Draw half the cycloid generated by a point in the circumference of a circle, of 1.3 inches radius, rolling along a straight line (semi-circum. = 4.084 inches).
2. Draw three turns of a triangular-threaded screw, 3.5 inches diameter and 1.25 inches pitch.
3. Show by their plans and elevations three spheres of 1, 2, 3 inches diameter, resting on a horizontal plane, each touching the other two; mark the points of contact.

4. A horizontal cylinder 2 inches diameter passes through a vertical one 3 inches diameter, the axis of the one being  $\frac{1}{2}$  inch from the other; show the curve of intersection.

5. Determine the shadow of a sphere of two inches diameter on a horizontal plane, the inclination of the sun's rays being  $50^\circ$ .

6. Construct a horizontal dial for latitude  $54^\circ$ , showing the hour-lines from 4 A.M. to 8 P.M. (N.B. The style or gnomon may be considered as a line.)

#### EXTRAORDINARY LAKE IN HONDURAS.

The following description is from the pen of Mr. E. G. Squier, and was communicated originally to an American newspaper:—

One of the most interesting, but hitherto almost unknown geographical features of Central America, is the Lake of Yojoa, or Taulebé, in Honduras. It was first indicated in Bailey's map of Central America, published in 1850, in which it was laid down with five outlets, two flowing eastward into the river Humuya, two running northward and uniting to form the Rio Blanco, and one flowing westward into the Rio Sta. Barbara. It was afterwards indicated, in my own map of Honduras, in 1855, with a single outlet, the river Blanco, which I also described as flowing, for a considerable distance, through a subterranean channel. At that time I greatly distrusted the existence of two or more outlets, in different directions, although this was stoutly affirmed to exist by the natives of the country. When Lieut.-Colonel Stanton, R.E., and Mr. Amory Edwards, late Vice President of the Honduras Railroad Company, sailed for Honduras in December last, I directed their attention to this lake, with the view of ascertaining the truth concerning it. In consequence, those gentlemen visited it in February last, and made a rapid survey. The following is their report:—

"We left Comayagua on the 2nd inst., and reached Siguatepeque on the 3rd, after overcoming one of the steepest *cuestas*, I think, that I ever saw. The plain of Siguatepeque surpasses any I have ever seen in beauty. It has an elevation of 3,600 feet above the level of the sea, and is about thirty miles long, and from three to eight broad, fringed with pine trees, which sometimes encroach upon it, conveying the idea of a park. The grass which covers the plain is luxuriant, and the soil is rich. It will produce wheat, potatoes, and generally the fruits of our climate. I found the English bramble, or our blackberry, indigenous, and of the greatest perfection. We crossed this plain in a direction nearly N.W., and reached the village of Taulebé, situated in a valley, surrounded by hills, 1,800 feet above the sea. We stayed here two days, and took the road due N., reaching a large stream, which here, rising from the N. flowed W., and I was surprised to learn that it was one of the outlets of Lake Yojoa. We followed up this stream for about ten miles, through a forest of mahogany and cedar, with the sarsaparilla vine in the greatest abundance, until we came to the Rancho de los Toros, situated on a slight elevation in a swampy plain extending to the lake. At this point in the river we found several canoes sent by our mutual friend Don Francisco Pineda. We at once embarked, myself steering the boat.

"Ascending against a strong current for about half a mile, we entered the clear waters of the lake. The wind was fresh from the N., and we tied up to the shore, awaiting a change. About midnight the wind subsided, and we started up the lake due north. In five hours we reached the hacienda of the Zelayas, at Agua Azul, a point about midway through the lake, on its right or eastern shore. We stopped here two days, during which time Sergeant Finch took some fine photographic views. The hacienda is a very fine one. It derives its name from an immense spring, seventy-five feet in diameter,

from which pours out a large stream, quite equal in volume to the Rio Blanco. The country here is a beautiful rolling savannah, like that near Sta. Cruz, on the road from Omoa to Comayagua. The ridges are all covered with pines. The two southern outlets of the lake, Jaitique and Sarapa, unite about fifteen miles below their point of debouchure from the lake. The latter, at a distance of two miles from the lake, enters a subterranean channel, through which it flows for upwards of a mile. The Rio Blanco, as you are aware, enters a similar channel, half a mile from the lake, through which it flows for a mile and a half. We found by barometrical observations that the surface of the water in Lake Yojoa is 2,050 feet above the sea."

This is the first authentic account which has yet been given of Lake Yojoa. It is certainly a peculiar and most interesting feature of Honduras, and with the construction of the proposed railway, which approaches within twenty miles of its shores, must become a point of attraction to travellers and to men of science.

#### WOLFRAM, TUNGSTEN, PAPER, AND DESIGNERS.

The *Times* correspondent, describing the Limoges Exhibition, notices samples of wolfram obtained from St. Leonard, near Limoges, exhibited by Messrs. Kœller and Jacob, of Vienna, and several articles manufactured from a combination which they have named wolframic steel. The goods, as well as the process of manufacture, are stated to be known in this country, where M. Jacob has established, near Plymouth, a manufacture of tungstate of soda, for dye purposes, but here tungsten is a novelty. One of the applications which M. Jacob proposes is the addition of tungstic acid to porcelain, to give it a translucent appearance resembling marble.

In speaking of the paper trade in the Limousin, he refers to it as "a further illustration of the mischief that results from blind adherence to routine and a spirit of opposition to progress. Formerly, and subsequent to 1806, the banks of the Vienne were the seats of important factories. The production in these works was more than doubled in the 20 years following, and in about 1834 there were more than 30 factories in full work, producing at least 500 reams a-day. When the English machines were first introduced, the Limousin manufacturers refused to adopt them. The consequence has been that the seat of manufacture has been removed elsewhere. The three towns of Limoges, St. Leonard, and St. Junien have beheld this profitable source of trade and employment for their inhabitants almost entirely disappear. At the present day praiseworthy efforts are made to revive this branch of manufacture. Three or four new works have been erected, and straw paper, of which there are several samples in the Exhibition, is successfully made. The leather trade has suffered like vicissitudes. Thirty years ago the annual production did not equal £160,000, more than a diminution by one-half of what it did half a century previously. In 1844, the annual production was £180,000; and since then the tanning and currying trades have been still more successful."

Referring to the porcelain trade of Limoges, after stating it was not until about the beginning of the present century that the manufacture acquired any importance, and that previously to that period the kaolin and petunse were extracted from St. Yrieix and the neighbourhood, to be prepared for manufacture at Sèvres, Paris, and elsewhere, he points out the remarkable fact that for a long time the manufacturers were content with producing goods which were sent to Paris to be printed and decorated, but that about 20 years back some Americans and English established themselves at Limoges, and now considerable quantities of porcelain are not only moulded and fired, but also decorated for exportation to the United States, the Levant, and other parts of the

world. "The most important decorating works here are those of Messrs. Haviland and Co., of New York, who gained a silver medal, and to whose courtesy I was indebted for permission to visit their establishment, where, curiously enough, the leading hands are from England. Thus, while Minton, Copeland, and the manufacturers in the Potteries import French decorators, the manufacturers of French china at Limoges employ English designers and ornamentalists. Nor is this the only instance where Englishmen are employed in the same branch; for at Creil, near Paris, the chief engravers of designs are Englishmen."

#### GALVANIC BATTERIES.

M. Petrouchowsky, of Kieff, in Russia, has been experimenting on the electro-magnetic forces of the various descriptions of galvanic batteries, and puts forth the following table of relative values as the result of his researches:—

1. Daniell's sulphate of copper, and dilute sulphuric acid, with amalgamated zinc .....	100
The same battery, with zinc not amalgamated...	93
2. Daniell's sulphate of copper, and a strong solution of chloride of sodium, with amalgamated zinc .....	105
The same battery, with zinc not amalgamated...	101
3. Daniell's, with the sulphuric acid replaced by a solution of tartrate of potash, with amalgamated zinc .....	105
With zinc not amalgamated .....	99
4. Wollaston's, with amalgamated zinc .....	93
5. Bunsen's, with amalgamated zinc .....	169
6. Bunsen's, with the carbon cylinder replaced by cast iron, with amalgamated zinc .....	172
7. Grove's, with amalgamated zinc.....	178

The effect of the amalgamation of the zinc to increase the electro-motive force is clearly shown.

M. Petrouchowsky adds that it is impossible that the numbers arrived at by different experimenters should agree perfectly, because in operating with any one given battery there will be always some slight differences, it being absolutely necessary that the metals and liquids should be chemically pure.

#### SOUTH KENSINGTON MUSEUM.

During the week ending 24th July, 1858, the visitors have been as follows:—On Monday, Tuesday, and Saturday (free days), 3,726; on Monday and Tuesday (free evenings), 4,551. On the three Students' days (admission to the public 6d.), 827; one Students' evening, Wednesday, 93. Total, 9,197.

#### Proceedings of Institutions.

WINDSOR AND ETON.—The half-yearly meeting of the Literary, Scientific, and Mechanics' Institution was held on Monday, the 5th June last. There was a large attendance of the members. In the unavoidable absence of Captain Bulkeley, the President, John Clode, Esq., one of the vice-presidents, was called upon to take the chair. Mr. C. T. Phillips, the honorary corresponding secretary, read the minutes of the general meeting held in December last, the report of the committee for the half-year, and the auditors' balance-sheet. From these documents it appeared that the Society was in a very flourishing state, the balance in hand amounted to £40 Os. 2½d. in the savings' bank, besides £30 invested as the nucleus of a building fund, and bearing in mind that nearly £40 had been laid out in improving the premises of the Society, and that the cost of new books, periodicals,

and newspapers during the past half-year had been nearly £25 more, the above statement may be considered very satisfactory. There were stated to be 35 more members than there were in the preceding June. The annual income yielded by the subscriptions was stated at £156 11s. In the library there had been several valuable additions, including Tighe and Davis's *Annals of Windsor*. The adoption of the report and balance sheet was carried on the proposition of Captain Wilson, R.N., and Mr. Boyce and Messrs. Hanson and Cobden respectively. It was also resolved that copies of both documents should be forwarded to H.R.H. the Prince Consort. The following gentlemen were then elected to serve on the committee, Mr. Dyson, the Rev. W. C. Bromehead, Mr. Wheeler, Mr. R. Smith, Mr. Dewe, Mr. Little, and Mr. Willmore; Mr. Turnock and Mr. Cleave were re-elected auditors. Some alterations in the rules passed at the last meeting were confirmed, and notice was given of some further additions that would be proposed at the next meeting. Several suggestions for the consideration of the committee were mentioned, particularly one, about which all present seemed unanimous, namely, that another Fête should take place with as many improvements as possible. The following votes of thanks were passed unanimously:—To the committee and officers of the Society on the proposition of the chairman and Mr. Adams; to the gratuitous lecturers and teachers of classes, proposed by Messrs. J. H. Passmore and Atkins; to the local press for their valuable services, on the proposition of Messrs. Lundy and Brooke; and to John Clode, Esq., for the manner in which he had officiated as chairman, on the proposition of Messrs. C. T. Phillips and Wheeler. After a brief speech in acknowledgment from the chairman, the meeting broke up.

#### PARLIAMENTARY REPORTS.

##### PRINTED SESSIONAL PAPERS.

- Parl. No. *Delivered on 21st July, 1858.*
394. Hainault Forest—Report from Mr. Charles Gore.  
 401. Land Transport Corps—Report from Committee.  
 404. Highways—Return.  
 433. Inland Revenue—Return.  
 324. Joint Stock Companies—Return.  
 223. Bills—New Writs (as amended in Committee, and on Re-commitment.)  
 224. — Consolidated Fund (Appropriation).  
*Delivered on 22nd July, 1858.*
387. Divine Worship in P. pulus Districts—Lords' Reports.  
 383. Caledonian Canal—53rd Report of Commissioners.  
 420. County Rates (Ireland)—Report from Committee.  
 424. War Department—Return.  
 437. Land Transport Corps—Copies of Despatches.  
 442. River Thames—Report from Committee.  
 419. Metropolitan Main Drainage—Return.  
 225. Bills—Gaols and Houses of Correction (No. 2).  
 226. — Clerk of Petty Sessions (Ireland) (as amended in Committee and on Re-commitment).  
 227. — Militia Act Continuance (No. 2).  
 228. — Militia (Service Abroad) Act Continuance.  
 230. — Saint Mary Magdalen (Newcastle) Charity.  
*Delivered on 2nd July, 1858.*
397. William Henry Baber's Petition—Report from Committee.  
*Delivered on 24th July, 1858.*
- 201 (12). East India (Revenues, &c.)—Account.  
 430. Dublin Metropolitan Police—Abstract of Return.  
 436. Jeffries' Smoke-Consuming Apparatus—Return.  
 436. Tottenham Court-road Accident—Return.  
 447. Navy (Number of Able Seamen, &c.)—Return.  
 449. Friendly Societies (Ireland)—Report of the Registrar.  
 420. County Rates (Ireland)—Report, &c., from Committee.  
 214. Bills—Debtors and Creditors.  
 231. — Drafts on Bankers' Law Amendment (as amended in Committee and on Re-commitment).  
 232. — New Writs (as amended in Committee, on Re-commitment and on second Re-commitment).  
 Public Works (Ireland)—26th Report of the Board.  
*Delivered on 26th July, 1858.*
451. Bray's Traction Engine—Return.  
 454. Slave Trade—Returns.  
 68 (6). Trade and Navigation Accounts (30th June, 1858).  
 229. Bill—Factories.

## PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[From Gazette, July 23, 1858.]

Dated 5th June, 1858.

1274. W. Hooper, Mitcham, Surrey—Imp. in the manufacture of projectiles.

Dated 28th June, 1858.

1452. J. Luis, 1P, Welbeck-street, Cavendish-square—An apparatus permitting the different parts of machinery working in the water of screw vessels with wells to be examined and mended. (A com.)
1454. J. Morgan, Rotherhithe—Imp. in machinery or apparatus for manufacturing or spinning rope yarns or other yarns.
1456. J. C. Coombe, 10, Alfred-place, Newington causeway, Southwark—Imp. in the method of and apparatus for manufacturing manures from fecal and other matters.
1458. W. E. Newton, 66, Chancery-lane—An improved mode of and apparatus for making nails. (A com.)
1460. B. Young and P. Brown, Spa-road, Bermondsey—An improved method of collecting and disposing of the sewage of towns or cities.

Dated 25th June, 1858.

1464. J. Shaw, Manchester—A machine to manufacture conical paper and other bags.
1466. H. N. Nissen, 43, Mark-lane—A method of preparing paper for receiving stains or copies from letters and other writings.

Dated 30th June, 1858.

1470. W. S. Wheatcroft and J. N. Smith, Manchester—Imp. in locks, fastenings, or safeguards, making them self acting or partially self acting.
1474. J. Petrie, jun., Rochdale—Imp. in machinery or apparatus for drying warps of yarn, or thread, and woven fabrics.

Dated 1st July, 1858.

1480. T. Riddell, Carracon-terrace, Old Ford, Bow—Imp. in the construction of omnibuses, and in breaks to be applied to such and other wheel carriages.

Dated 2nd July, 1858.

1482. W. T. Smith, 21, Lincoln's-inn-fields—Imp. in and the combination of certain machinery or apparatus for winnowing, washing, sifting, and separating grain, ballast, sand, shot, minerals, and other materials.

1484. J. Morris Broughton Copper Works, Salford—An improved construction of or improvements in the construction of copper rollers or cylinders for printing fabrics.

1488. A. V. Newton, 66, Chancery-lane—Certain imp. in lamps. (A com.)

1490. T. Melldow, J. Duxbury, and E. Layfield, Oldham—Imp. in machinery or apparatus for spinning and doubling or twining cotton and other fibrous materials.

1492. D. Le Souëf, Twickenham—An improved shaft-bearer, or tug, and an improved manner of affixing the same to the harness. (A com.)

Dated 3rd July, 1858.

1494. J. Billing, Abingdon-street, Westminster—Imp. in fire-places or stoves.

1496. C. Buhning, Great College-street, Camden-town—Imp. in apparatus for filtering liquids and other fluids containing impurities.

1498. W. Bond and T. Standing, Preston—Imp. in apparatus for churning, mixing, and stirring cream, milk, and other liquids.

1500. J. G. Jennings, Holland-street, Blackfriars, and J. Lovegrove, Victoria-park road—Imp. in water-closets, and in apparatus used in ventilating house drains or sewers.

Dated 5th July, 1858.

1506. E. Simons, Birmingham—Imp. in castors for furniture.

1508. G. J. Newbery, Straitsmouth, Greenwich—Imp. in the manufacture or production of coverings for floors, applicable also to the manufacture of table mats, and other articles or coverings.

1510. T. Woolner, Blue Pits, Lancashire—Imp. in apparatus for feeding steam boilers with water.

1512. J. Greenwood, South Audley-street—Imp. in marine propellers.

Dated 6th July, 1858.

1513. J. T. Davies, Liverpool—An improved lock. (A com.)

1515. H. Hughes, Homerton—Imp. in gauff ring and crimping machines, parts of which are applicable to the manufacture of continuous belts and shutters.

1516. W. E. Newton, 66, Chancery-lane—Imp. applicable to roller blinds. (A com.)

1517. J. Davis and T. Evans, Ulverston, Lancashire—Imp. in engines to be actuated by steam, air, or gases.

1518. J. Buchanan, Port Glasgow, Renfrew, N.B.—Imp. in propelling ships, vessels, and boats.

Dated 7th July, 1858.

1519. W. A. Smith, Belper, Derbyshire—Imp. in machines for making bricks, tiles, or pipes of clay.

1520. H. C. Schiller, London—Certain improved apparatus for laying down and recovering submarine telegraphic cables.

1521. J. J. Florance, Paris—Imp. in reels or spooling wheels.

1522. P. Mercier, Paris—Imp. in the treatment of peat, and in preparing the same for fuel.

1523. J. Holland, Gibb-street, Deritend, and F. Potts, Deritend, Birmingham—Certain improvements in ornamenting metallic bedsteads, and which said improvements are also applicable to the ornamenting of other metallic surfaces.

1524. W. Clissold, Dudbridge, Gloucestershire—Improved machinery for cutting or rasping dyewoods.

1525. T. James, Saint George's-in-the-East—Imp. in treating sewage matter.

1526. G. A. B. Chick, 56, Milk-street, Leek-lane—An imp in the preparation of graphite or plumbago or black lead.

1527. G. T. Bousfield, Loughborough-park, Brixton—Imp. in apparatus for ironing linen and other fabrics. (A com.)

1528. J. D. Weston, Stour Valley Iron Works, West Bromwich—Imp. in rolling iron for the manufacture of bolts and pins.

1529. A. W. Sleish, Mansell-villas, Wimbledon-park—Imp. in the construction of floating sea barriers, or artificial beaches, breakwaters, and batteries.

Dated 8th July, 1858.

1531. J. Marland, Glodwick, near Oldham, and J. Widdall, Abbey-hill, Lancashire—An improved self-acting hook or holder to prevent accidents in lifting, hoisting, or winding at coal pits, or other similar purposes.

1532. H. Gidlow, Atherton, Lancashire—Imp. in breaks for steam engines.

1533. J. B. Booth, Preston, and R. Ashworth, Heywood, Lancashire—Imp. in the means of stopping or retarding the progress or velocity of railway carriages.

1534. P. F. Demoulin and J. Cotelie, Paris—Imp. in treating the heavy oils obtained from the distillation of coals, schists, and other hydro-carbons.

1535. T. T. Chellingworth, West Bromwich—A high-pressure steam engine.

1536. P. R. Hodge, 16, Chaloot-crescent, Primrose-hill—Imp. in brewing fermented liquors, and in treating materials used therein for purposes of food.

1537. R. Smith, Sheffield—An improved adjustable pipe tongs. (A com.)

1538. S. Samuels, New York—Imp. in laying submarine telegraphic cables.

1539. S. Harrison, Stanhope-street, Clare-market—Imp. in ovens.

1540. P. J. Crickmer, Borough-road—Imp. in treating the sewage of London and neighbourhood.

1541. R. G. C. Fane, Upper Brook-street—Imp. in treating sewage, and in apparatuses to be employed therein.

1542. M. Scott, 3, Stanhope-street, Hyde park-gardens—Imp. in constructing breakwaters, and other like structures.

1543. G. Collier, Halifax—Imp. in means or apparatus for the drying of wool and other fibre.

1544. G. Sampson, Bradford—Imp. in means or apparatus employed in the finishing of woven fabrics.

Dated 9th July, 1858.

1545. W. Simons, Glasgow—Imp. in or connected with ships or vessels.

1547. J. Broadley, Saltaire, near Bradford—Imp. in means or apparatus employed in weaving.

1549. C. N. Kottula, Liverpool—Imp. in the manufacture of manure.

1551. J. M. Rowan, Glasgow—Imp. in manufacturing wrought-iron wheels and bosses or centres, and in the mode of, and furnaces for, heating the same during such manufacture. (A com.)

## INVENTIONS WITH COMPLETE SPECIFICATIONS FILED.

1562. M. A. F. Mennons, 39, Rue de l'Echiquier, Paris—Imp. in the construction of fire-engines and similar apparatus. (A com.)—12th July, 1858.

1641. J. V. N. S. Peirziwalsky, Pall-mall—Imp. in the manufacture of bread, and in the apparatus to be employed therein.—20th July, 1858.

## WEEKLY LIST OF PATENTS SEALED.

July 23rd.

132. J. J. Welch and J. S. Mar-getson.

134. A. Wall.

157. T. Armitage.

173. R. Coleman.

197. F. F. Dillage.

203. J. Harrison.

237. G. L. Blyth.

300. J. E. Boyd.

638. H. Napier.

711. W. Crowley.

845. J. H. Johnson.

925. E. Hunt and H. D. Pochin.

1133. J. Adamson.

July 27th.

159. J. Bethell.

164. R. A. Brooman.

168. H. W. Hart.

169. W. Kaye and C. Kaye.

172. J. Newling.

175. T. Taylor, sen., T. Taylor, jun., H. Nelson, and H. Spencer.

180. G. Bartholomew.

184. R. A. Brooman.

185. R. A. Brooman.

186. W. J. Hay.

216. J. Welch.

238. J. Wells.

246. E. Stevens.

248. W. S. Clark.

271. A. V. Newton.

309. W. E. Newton.

341. G. Schaub.

367. W. E. Newton.

678. W. Oldfield & T. O. Dixon.

725. O. Sarony.

770. H. Bauerrichter and C. G. Gottgetreu.

809. C. Mather & H. Charlton.

930. J. H. Bennett.

1016. H. Jackson.

## PATENTS ON WHICH THE STAMP DUTY OF £50 HAS BEEN PAID.

July 19th.

1640. H. D. P. Cunningham.

July 20th.

1655. S. J. Pittar.

July 21st.

1693. C. Schiele.

July 22nd.

1662. H. W. Ripley.

1680. R. A. Brooman.

1681. Tony Petitjean.

July 23rd.

1691. W. Weallens & G. A. Crow.